WHAT IS CLAIMED IS:

1. An electrode employing a nitride-based semiconductor of III-V group compound, comprising:

a nitride-based semiconductor layer of III-V group compound;

an electrode metal; and

a metal oxide inserted between said nitride-based semiconductor layer of III-V group compound and said electrode metal.

2. The electrode employing a nitride-based semiconductor of III-V group compound according to claim 1, wherein said metal oxide is an oxide of metal element(s) permitting formation of a nitride semiconductor.

3. The electrode employing a nitride-based semiconductor of III-V group compound according to claim 1, wherein said metal oxide is a semiconductor having a bandgap of not greater than 3.0 eV.

4. The electrode employing a nitride-based semiconductor of III-V group compound according to claim 1, wherein a metal of said metal oxide includes at least one of indium (In), lanthanum (La), cerium (Ce), praseodymium (Pr), neodymium (Nd), promethium (Pm), samarium (Sm), europium (Eu), gadolinium (Gd), terbium (Tb), dysprosium (Dy), holmium (Ho), erbium (Er), thulium (Tm), ytterbium (Yb), and lutetium (Lu).

5. A producing method of an electrode employing a nitride-based semiconductor of III-V group compound, comprising the steps of:

forming a nitride-based semiconductor layer of III-V group compound;

forming an electrode metal; and

inserting a metal oxide between said nitride-based semiconductor layer of III-V group compound and said electrode metal in an oxygen-deficient state.

6. The producing method of an electrode employing a nitride-based semiconductor of III-V group compound according to claim 5, wherein said step of inserting the metal oxide is conducted by sputtering or evaporation.